SCIENCE
And Technology Program

Theme Area: Facilities and Infrastructure

Program Area: Remote Sensing GIS

Project No.: FI00.07

Project Title: Remote Sensing Applications of Hyperspectral Data

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Abstract: The field of remote sensing is rapidly moving towards finer spatial and spectral resolutions as new sensors become available. This new technology greatly enhances our ability to detect the presence of plant and mineral species within remotely sensed images. The proposed research seeks to identify the benefits to Reclamation of hyperspectral data. It also seeks to identify the appropriate seasons and broader spectral bands that will enable existing remote sensing technologies (multispectral and photographic) to better detect targets of interest, and to develop procedures for ground-based spectra collection for the purposes of identifying target species and removing atmospheric effects from remotely sensed imagery. Partners in this research include Earth Search Sciences, Inc., of McCall, Idaho, who have provided $30,000 worth of hyperspectral image data for use by this project. Other cooperators include the Platte River studies, and noxious weed mapping projects. There will be continued cooperation with the USGS, including their Spectroscopy Laboratory in Denver. Technical advice and data will be shared with the Institute of Hydrographic Studies, Madrid, Spain.